

Comparisons of Job Characteristics

Focus Occupation: Environmental Engineering Technicians (17-3025)

Associated Occupation: Environmental Engineers (17-2081)

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge

Similarity of Focus Occupation to Associated Occupation: 91

Focus Occupation: Environmental Engineering Technicians (17-3025)

Associated Occupation: Environmental Engineers (17-2081)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Engineering and Technology	5.7	21.7	15.8	<<	Extensive education and/or training may be required
Design	5.2	17.2	11.1	<<	Extensive education and/or training may be required
Mathematics	9.2	16.3	11.2	<<	Extensive education and/or training may be required
Chemistry	4.8	15.8	7.0	<<	Extensive education and/or training may be required
Physics	4.3	15.7	10.2	<<	Extensive education and/or training may be required
Law and Government	5.9	13.6	9.5	<<	Extensive education and/or training may be required
Building and Construction	4.0	13.0	10.6	<	Expanded education and/or training may be required
Public Safety and Security	6.9	12.0	8.6	<<	Extensive education and/or training may be required
Biology	3.7	10.0	6.8	<<	Extensive education and/or training may be required
Transportation	4.6	9.0	2.6	<<	Extensive education and/or training may be required
Geography	3.9	8.3	6.2	<<	Extensive education and/or training may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 85

Focus Occupation: Environmental Engineering Technicians (17-3025)

Associated Occupation: Environmental Engineers (17-2081)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Reading Comprehension	10.7	16.4	16.3	0	Current skill level may be sufficient
Critical Thinking	10.8	14.5	14.5	0	Current skill level may be sufficient
Complex Problem Solving	9.1	13.9	11.2	<	A higher skill level may be required
Judgment and Decision Making	9.4	13.9	11.1	<	A higher skill level may be required
Systems Analysis	6.5	13.1	7.5	<<	Extensive development of skills in this area may be required
Mathematics	6.2	12.3	11.3	0	Current skill level may be sufficient
Systems Evaluation	6.4	11.7	7.7	<<	Extensive development of skills in this area may be required
Science	4.5	11.4	8.3	<<	Extensive development of skills in this area may be required
Operations Analysis	5.0	11.0	6.2	<<	Extensive development of skills in this area may be required
Quality Control Analysis	5.9	10.4	9.7	0	Current skill level may be sufficient
Management of Financial Resources	3.3	7.2	3.6	<<	Extensive development of skills in this area may be required
Programming	2.2	5.6	5.0	<	A higher skill level may be required
Technology Design	2.6	5.5	4.5	<	A higher skill level may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities		Similarity of Focus Occupation to Associated Occupation: 89			
Focus Occupation: Environmental Engineering Technicians (17-3025) Associated Occupation: Environmental Engineers (17-2081)					
Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Problem Sensitivity	11.1	17.0	15.9	0	Current ability level may be sufficient
Deductive Reasoning	10.6	16.2	14.5	<	Some improvement in abilities may be required
Oral Comprehension	12.5	16.1	14.4	<	Some improvement in abilities may be required
Written Comprehension	11.0	16.0	16.6	0	Current ability level may be sufficient
Inductive Reasoning	10.2	15.4	13.6	<	Some improvement in abilities may be required
Information Ordering	9.9	14.2	13.3	0	Current ability level may be sufficient
Category Flexibility	9.0	13.6	11.8	<	Some improvement in abilities may be required
Flexibility of Closure	7.8	13.5	7.3	<<	Extensive improvement in abilities may be required
Mathematical Reasoning	6.3	13.4	10.6	<	Some improvement in abilities may be required
Perceptual Speed	7.4	11.9	8.8	<<	Extensive improvement in abilities may be required
Speed of Closure	5.9	11.2	5.6	<<	Extensive improvement in abilities may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common

Similarity of Focus
Occupation to Associated
Occupation: 88

Focus Occupation: Environmental Engineering Technicians (17-3025)
Associated Occupation: Environmental Engineers (17-2081)

Work Activities	Exclusivity of Activity
Analyze scientific research data or investigative findings	27
Analyze technical data, designs, or preliminary specifications	47
Calculate engineering specifications	64
Communicate technical information	4
Create mathematical or statistical diagrams or charts	43
Develop plans for programs or projects	31
Estimate cost for engineering projects	69
Evaluate engineering data	60
Examine engineering documents for completeness or accuracy	62
Explain complex mathematical information	30
Follow safe waste disposal procedures	50
Prepare technical reports or related documentation	22
Read technical drawings	7
Test equipment as part of engineering projects or processes	67
Understand engineering data or reports	48
Use building or land use regulations	65
Use government regulations	44
Use hazardous disposal techniques	80
Use hazardous materials information	35
Use pollution control techniques	62
Use scientific research methodology	21
Use technical regulations for engineering problems	61

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus
Occupation to Associated
Occupation: 88

Focus Occupation: Environmental Engineering Technicians (17-3025)
Associated Occupation: Environmental Engineers (17-2081)

Tools and Technologies	Exclusivity
Audio and visual equipment	4
Autoclave and sterilizer equipment and accessories	12

Business function specific software	1
Chemical evaluation instruments and supplies	10
Chromatographic measuring instruments and accessories	16
Computer data input devices	2
Computer printers	2
Computers	1
Content authoring and editing software	1
Data management and query software	1
Development software	4
Electrical measuring and testing equipment	7
Electrochemical measuring instruments and accessories	9
Filters	30
Fluid mechanics equipment	11
Gas analyzers and monitors	10
Hydrological instruments	31
Indicating and recording instruments	2
Industry specific software	1
Information exchange software	1
Laboratory centrifuges and accessories	13
Laboratory decanting and distilling and evaporating and extracting equipment and supplies	19
Laboratory electrophoresis and blotting system and supplies	26
Laboratory enclosures and accessories	17
Laboratory environmental conditioning equipment	24
Laboratory freeze dryers and lyophilizers and accessories	40
Laboratory furnaces and accessories	26
Laboratory incubating equipment	20
Laboratory mixing and stirring and shaking equipment and supplies	19
Laboratory ovens and accessories	15
Laboratory water purification equipment and supplies	29
Light and wave generating and measuring equipment	4
Liquid and gas flow measuring and observing instruments	15
Liquid and solid and elemental analyzers	19
Network applications software	1
Pumps	9
Sampling equipment	12
Soil measuring equipment	20
Spectroscopic equipment	10
Temperature and heat measuring instruments	6
Viewing and observing instruments and accessories	4
Weight measuring instruments	7

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.